

# ARNOLD ARBORETUM

## HARVARD UNIVERSITY



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**Flowers in the Arboretum.** During the week this Bulletin reaches its readers a large number of trees and shrubs will be flowering in the Arboretum, including several species of Amelanchier, some of the early Honeysuckles, Currants, Gooseberries, Rhododendrons and Viburnums, many Willows, the early-flowering Canadian Plum tree, *Prunus nigra*, many of the Asiatic Crabapples, several species of Wild Pears, and one or two of the early-flowering species of Lilacs.

**Unfolding leaves.** Much is to be learned of trees by the study of their unfolding leaves. The color of these and the absence or presence of a covering of down may, for some trees like the Lindens, furnish the best characters for distinguishing related species. This is certainly one of the best times of the year for the study of Oak-trees and Hickories. The unfolding leaves are often brilliant in color, and their hairy covering, when such a covering exists, furnishes a useful character for determining such trees. Very beautiful and interesting, too, are the very young leaves of the Horsechestnuts. Indeed there is not a tree or shrub which, as the leaves unfold, is not capable of affording an observing lover of plants much information and the keenest pleasure, and this is a pleasure which can be found in the Arboretum in a new form every day from the unfolding in early April of the leaves of the California *Osmaronia cerasiformis* and the Chinese *Prinsepia sinensis* to the appearance of those of the Fringe-tree (*Chionanthus virginica*) which remains leafless until after the flowering of many shrubs and trees has passed.

**The wild Pear-trees.** Much attention has been paid to the formation of the Arboretum collection of these trees because several of the species are among the most beautiful of all flowering trees. To pomologists, too, they are of special interest as the wild types from which the cultivated pears have been derived, and as possible factors in the production of new and perhaps hardier races of fruit trees. Wild Pear-trees are found in China, on the Himalayas, in southwestern Asia and in southeastern and southern Europe. There is no native Pear-tree in Japan or in any part of America. About twenty-five species are recognized by botanists, and of these at least twenty with a few hybrids and varieties are now established in the Arboretum. The most important species but not the most beautiful in flower is *Pyrus communis*, one of the European species from which the common garden pears have been derived. The wild form of this tree is in the Arboretum collection. Some of the species, like *P. elaeagrifolia* of southeastern Europe, are conspicuous in early spring before the flowers open from the silvery color of the unfolding leaves, but as ornamental trees some of the Chinese species are better worth cultivating here than those of Europe or western Asia. All the eastern Asiatic species are now growing in the Arboretum; many of them have large, handsome and lustrous leaves, and on a few the fruit is conspicuous. Among the Chinese species which have been thoroughly tested in the Arboretum the handsomest perhaps is *P. ovoidea*, a native of the northern provinces and one of the first in the collection to open its flowers. These are followed by yellow juicy fruits of good flavor which, unlike those of all other Pear trees, are largest at the base and gradually taper to the apex. Another remarkable thing about this tree is that in the autumn the leaves turn as bright scarlet as those of any Asiatic Red Maple or Gum tree. As an ornamental tree this Pear deserves the attention of gardeners and its hardiness and the quality of its fruit suggests its possible value in the production of a new race of fruit trees. Another Chinese species, *P. Bretschneideri*, is also well worth the attention of pomologists; it is a tree with large lustrous leaves, large flowers and yellow, nearly globose fruit of good flavor. This is probably, in part at least, the wild origin of the excellent pears which are sold in Peking during September and October. The brown-fruited *Pyrus serrulata*, one of the new species discovered by Wilson in western China, is of particular interest, too, as from this species are evidently derived the round russet pears which in many forms have been so generally cultivated in Japan and are occasionally seen in American collections. The largest specimen of *P. serrulata* in the Arboretum is growing among the Japanese Azaleas on the southern slope of Bussey Hill where it flowered for the first time last year. The Leconte and the Keiffer are two hybrid pears well known in this country where they were raised many years ago by crossing a garden pear with some Chinese species of doubtful identity and uncertain origin. These hybrids have not proved very hardy in the north, but have been planted in immense numbers in some of the southern states where they pro-



duced large crops of fruit until the trees were attacked by the Pear blight which has ruined many of these orchards. *P. ovoidea* has been growing in the Arboretum for eighteen years and *P. Bretschneideri* for thirty-four years and have never been attacked by the Pear blight. It is suggested that by crossing these species with some of the garden Pears valuable results in the way of a new and very hardy race of Pear-trees may be secured. Among hybrid plants in this group attention is called to

**Pyrus malifolia.** This is a natural hybrid between the common Pear and the White Beam-tree of Europe, *Sorbus Aria*, and is very similar and perhaps a seedling of the hybrid Bollwyller Pear which appeared in Alsace more than three hundred years ago as it was first mentioned by the botanist Bauhin in 1619. *P. malifolia* has large pale oval leaves and large flowers in few-flowered clusters. It is perfectly hardy and a remarkably fast-growing tree which promises to attain a large size in this climate. It well deserves a place in New England collections of flowering trees.

The Asiatic Crabapples are beginning to flower and as the American species do not bloom until later it will be possible to enjoy in the Arboretum the beautiful flowers of these trees for several weeks. The collection is a large one and now contains plants large or small of all the American and Old World species with the single exception of the little known *Malus formosana*, a native, as its name implies, of the island of Formosa. The collections made by Mr. Wilson in China and Japan have thrown much light on several of the Asiatic species which are now much better known than they were a few years ago. The discovery that a common Apple-tree of western China, largely cultivated as a fruit tree in the mountainous districts of Hupeh and Szechuan, is a form of *Malus prunifolia* which, although it has been in European gardens for nearly a century, was not known before as a wildtree, is interesting. This form is now called

**Malus prunifolia, var. rinki.** It is a tree in its wild state with greenish yellow fruit sometimes with a reddish cheek, or rarely entirely red, rather longer than broad and not often more than an inch and a quarter in diameter; it is juicy and has an acid flavor. This tree was early introduced into Japan where it was formerly cultivated in many forms as a fruit tree. The good quality of the fruit of some of these is mentioned in his recently published reminiscences by Lord Redesdale who, in the early 60's as a member of an English Embassy, found them in a remote part of Japan. The cultivation of the Rinki was given up in Japan after the introduction of American and English Apple-trees and it is now a rare plant there. It is this Apple which is often called *Pyrus* or *Malus Ringo* in European publications. Judging by the climate where this tree grows naturally in western China, it should prove as hardy as the Siberian *Malus baccata* which is one of the parents of the hardy race of Apples now much cultivated in the

extreme north as Siberian Crabs, and it is not improbable that by crossing the Rinki with some of these hybrid Crabs, or with the hardiest varieties of the common Apple, a race may be obtained more valuable for the cold parts of North America than any of the Apples which can now be grown in some of the northern states and in the northwestern provinces of Canada.

**Malus floribunda.** Of the fifteen species of eastern Asiatic Crab-apples, with their numerous varieties and hybrids, not one is more satisfactory as a garden plant than this tree. It is a low, bushy, round-topped tree not more than eighteen feet high which year after year covers itself with bright rose-colored flower-buds, which are followed by pink and finally by white flowers. Nothing is known of the history of this plant beyond the fact that it was sent to Europe by the Dutch naturalist Von Siebold before 1856 when the name first appeared in his catalogue of Japanese plants. Mr. Wilson, however, did not see it in Japan, and it does not appear to be known to Japanese botanists. It has been suggested by different authors that it might be a hybrid, various species having been named as its possible parents. Its hybrid origin is not improbable for seedlings show considerable variation, especially in the time of the falling of the fruit. On plants propagated by grafting from those originally introduced by Von Siebold the fruit drops early in the autumn, but on some of the seedling plants raised in the Arboretum the fruit remains on the branches until spring. There are several large plants of these seedlings in the neighborhood of the Administration Building which through the winter furnished large quantities of food to many different kinds of birds. A seedling of *M. floribunda* which appeared spontaneously many years ago in the Arboretum has larger flowers and fruit than that plant, and is evidently a hybrid with some form of *Malus baccata*. This hybrid has been named *M. Arnoldiana* and is one of the handsomest of all Crabappies.

The old Crabapple Collection is on the left-hand side of the Forest Hills Road, but the largest number of these plants will be found in the new collection at the eastern base of Hemlock Hill.

In subsequent bulletins attention will be called to the most interesting species as they flower.

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An illustrated guide to the Arboretum containing a map showing the position of the different groups of plants has recently been published. It will be found useful to persons unfamiliar with the Arboretum. Copies of this guide can be obtained at the Administration Building in the Arboretum, from the Secretary of the Massachusetts Horticultural Society, 300 Massachusetts Avenue, Boston, from The Houghton, Mifflin Company, 4 Park Street, Boston, and at the office of the Harvard Alumni Bulletin, 50 State Street, Boston. Price, 30 cents.

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